DOCUMENT RESUME

ED 198 834 IR 009 219

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TITLE The Implementation of Data Base Searching at Three Campuses of the State University of New York.
PUB DATE 5 Jun 80
NOTE 29p.; Based on papers presented at the Annual Conference of the State University of New York Librarians' Association (Farmingdale, NY, June 5, 1980).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Libraries; *Databases; Higher Education; *Information Seeking; *Library Administration; *Library Services; *Online Systems; *Reference Services; State Universities
IDENTIFIERS State University of New York

ABSTRACT

These three essays describe the practical and administrative aspects of the implementation of computerized database searching at the Albany, Buffalo, and Stony Brook SUNY campuses. Originally prepared as papers for a conference of SUNY librarians, each essay focuses on one campus to address such questions as the number of patrons who use the service; the proportion of faculty, graduate students, undergraduates, and off-campus users who make up the user group; which databases are most heavily used; how the searching is financed; whether patrons are screened in advance; and, if so, by whom; whether patrons are present at the search; whether online databases are used for answering quick reference questions as well as for extended literature searches; and the training and deployment of searchers. Responses to these questions indicate that there is a considerable diversity in practice in the way database searching is carried out on the three campuses, and some of the reasons for this diversity are indicated in the introduction, as well as some underlying problems faced by all campuses in their efforts to provide online search services. (RAA)

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The Implementation of Data Base Searching

at Three Campuses of the State University of New York

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Based on Papers Presented at the Annual Conference of

The State University of New York Librarians' Association,

June 5, 1980

Farmingdale, New York

IR009219

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ABSTRACT

The papers in this document focus on the practices and policies followed in the implementation of computerized data base searching at three campuses of the State University of New York (Albany, Buffalo, and Stony Brook). The speakers were asked to respond to a list of questions on the practical and administrative aspects of data base searching. The questions included: How many patrons use the service? What is the make-up of the user group (e.g. what proportion are faculty, graduate students, undergraduates, or off-campus users)? Which data bases are most heavily used? How is data base searching financed? Are patrons screened in advance and by whom? Are patrons present at the search? Are on-line data bases used for answering quick reference questions as well as for extended literature searches? How are searchers trained and deployed?

The responses indicate that there is considerable diversity in practice in the way data base searching is carried out at the various campuses of the State University of New York. An effort is made in the introduction to indicate some of the reasons for this diversity and to point out some underlying problems faced by all campuses at the State University of New York in their efforts to implement computerized data base searching.

FEB 2 1981

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Introduction

The following essays are based on papers delivered at the 1980 Annual Conference of the State University of New York Librarians' Association (SUNYLA), which was held at the SUNY College at Farmingdale, Long Island. Because the papers generated considerable discussion and several requests were made for copies of them, the participants in the panel have agreed to make them available to a wider audience.

These papers focus on the practical aspects of data base searching. The SUNYLA Programs Committee thought that the day to day implementation of data base searching was a neglected topic in the literature on the computerized retrieval of information. Most materials which have appeared on data base searching have dealt primarily with such matters as the contents of individual data bases, searching techniques, and the comparative merits of different data base vendors. The Programs Committee also believed that the subject of this panel would gain added value for a conference of SUNY libraries because of their common institutional affiliation. It was thought that the similarity in structure and funding of the SUNY schools would mean that SUNY libraries would share common problems in the implementation of data base searching.

The members of the panel were asked to respond to as many as they wished of a list of questions. The list included: How many persons use the service? What is the make-up of the user group (e.g. faculty, graduate students, undergraduates, or off-campus users)? Which data bases are most heavily used? How is data base searching financed? Are patrons screened in advance and by whom? Are patrons present at the search? Are on-line data bases used for answering ready reference questions as well as for extended literature searches? How are searchers trained and deployed?

The reader of these papers will see that the answers to these questions vary widely from campus to campus. Particularly striking is the divergence in administrative organization--ranging from the highly decentralized system at Buffalo to the existence of a separate Information Retrieval Section at Albany. Also notable are the wide

variations in what will or will not be done for a patron at an individual search--particularly in the number of data bases that will be searched, in the number of citations that will be printed on-line, and in the charges which are made. One reason for the divergence in practices between the various SUNY libraries is probably the relative newness of data base searching, which is still in its experimental stages. Some of the differences may also reflect the differing programs of the various campuses as well as divergent philosophies about what data base searching should accomplish.

Amidst this diversity, several shared concerns stand out. First and foremost is the problem of funding. Perhaps because it is a fairly new service, there is no established source for financing data base searching at all SUNY campuses. As a consequence, individual libraries have to scrape up funds from a variety of sources to pay for on-line searching. Because of this situation, it should come as no surprise that lack of adequate funding underlies many of the problems encountered at individual campuses. Problems related to inadequate funding include long waiting lists for searches, the need to limit access to searches by careful screening of applicants, and the necessity of restricting choice of vendors and data bases.

The problems arising from pressures to screen applicants and select data bases are becoming increasingly acute. There is clearly a growing demand for searches at all campuses. As many new--and sometimes very expensive--data bases are continually being added by vendors, searchers are more and more being forced to decide what is an "appropriate" search. One question which is being faced is: should undergraduates doing research for term papers which can be performed adequately--but with difficulty--using printed indexes be allowed to sign up for searches? This question has become particularly pressing since the advent of the very expensive--and potentially very popular--<u>New York Times</u> data base on BRS. A related question is: should faculty be allowed unlimited access and full subsidy for highly specialized data bases in areas not directly related to a school's curriculum? The existence of expensive data bases

in such fields as patents and law makes this question very pertinent.

The following presentations led to an extensive discussion period. There is not sufficient space here to summarize all of the questions which were raised. Two topics in particular stand out in my mind. The first is the philosophical question of whether free searches should be offered as a matter of right to our entire constituency of students and faculty. Responses varied widely from those who felt that data base searching is an expensive luxury to those who believed that access to data bases should be put on the same level as access to books in the library--free to all patrons. This difficult question is now being considered by a SUNYLA ad hoc committe on charging for data base services.

Another question which came up in the discussion period was: how appropriate is on-line searching for four-year colleges and community colleges? Although all three spekers on the panel are from University Centers, it was pointed out that on-line searching is either being planned or implemented at several four-year colleges. Some people in the audience from the small colleges also questioned whether there was really a need for computerized search facilities on their campuses. Some argued that the limited demand for searches on their campuses could be met adequately by using the free search service for NYSIL members offered by the New York State Library in Albany. Perhaps the question of data base searching at smaller SUNY schools is one which should be explored at a future SUNYLA conference.

Online Searching at SUNY Albany

The University Libraries of the State University of New York at Albany became a member of the SUNY Biocommunication Network in October 1972. At that time there was access to only one database, MEDLARS. Coordinated by Sally Knapp and assisted on a part time basis by a library intern, the Bibliographical Services Section of the Bibliography Division was moved organizationally to the Reference Department and later became the Information Retrieval Section. In the first six months of operation, a grand total of 229 searches were performed by the unit. With the addition of the ERIC, Psychological Abstracts, and Biological Abstracts databases in the following year, demand for service increased and at one point a backlog of 125 searches waited to be filled. At that time, it was decided to adopt an appointment system already being used by SUNY, Buffalo. Today the Information Retrieval Unit consists of twelve searchers, provides access to over 38 databases, and in the month of April 1980, provided 293 searches for SUNYA users, 17 searches for non-SUNYA patrons, 64 current awareness or SDI profiles, 27 quick reference questions, and 9 New York State Library Referrals.

Some factors I feel that have caused the success of the evolution of the service has been the reorganization of the organizational structure of the library, the appointment system employed for the service, the present fee structure for charging for the service, and the broad support and participation of the library staff.

In 1977, librarians and administrators saw a need for change in the library's organizational structure. The separate departments of Reference and Collection Development were merged to form the Reference and Collection Development Department. The information Retrieval Section which had been a part of the Reference Section since 1972, became one of the six units of the newly merged department. The other five units are Bibliographic Development, Reference, Government Publications, Library Instruction, and Special Collections. At present 24 professional librarians comprise

the department. Each individual has primary responsibility in one unit with additional assignments in other units. All individuals are regularly scheduled at the centralized Reference Desk, Government Publications Reference Desk, or the Information Retrieval Terminal. Not only have collection development and faculty liasion responsibilities been distributed over a large number of people, presently eleven, but also online searching has been similarly distributed. Communication within the department has improved: the RCDS Department, the Coordinators, and each section individually have separate bimonthly meetings for open discussion of policies, practices, problems, or proposed innovations. This is particularly important for the Information Retrieval Unit since online systems and databases are evolving so rapidly.

How is the service set up and whom are we serving? The Information Retrieval Unit provides online services for retrospective and current awareness search requests falling within the subject coverage and time periods of available databases. The library provides financial support for search services on selected databases, chosen by the professional staff of the Bibliographic Development and Information Retrieval Sections. Searches on all available databases are not financially supported just as not every available book is purchased. Databases are selected on the basis of need, years of coverage, ability to provide access better than the printed index, and their relevance of subject coverage with courses and degree programs offered by the university. Searches on databases not directly available to the library may be referred to other agencies. Currently we search 20 databases from BRS, can refer to the New York State Library for 18 of their databases, and in the Fall will hopefully add 9 Lockheed files to our menu. The Information Retrieval Unit tries to make the service as useful as possible to the rest of the library. For reference or inter-library loan librarians, quick searches for problems of verification, incomplete citations, or other quick reference questions are provided. A look at the last five years of statistics shows that 10-15% of our users are usually faculty, 60-65% are graduate students, and 10-15% are undergraduates. Charges to these individuals

includes only the cost of offline print charges since 1977. A .056% overhead is added to this cost for the maintenance of an account with the university. Print charges to the patrons are collected into an Income Fund Reimbursable (IFR) account. Our bills from database vendors are paid from that account and a Supplies and Equipment (S&E) account. The library absorbs the cost of the telecommunication charges and the online database charges. With the addition of a 1200 baud terminal with a printer in the next few weeks, online printing options will be made available to the patron who will at the time of their search will receive his/her citations online and pay only for the time used in printing the search results. Again, the library will absorb the cost of the search on the database. The patron will pay only for the online printing cost.

An appointment system is used to provide online services at SUNYA. Searchers' schedules include specified hours on the reference desk and at the information retrieval terminal. During hours that a searcher is scheduled at the terminal, appointments are booked on the databases searched by that particular librarian. Before appointments are scheduled, librarians at the reference desk interview all patrons, determine if a search is required, and select an appropriate database. Half hour appointments with search analysts are then scheduled by the reference support staff. Databases are paired with a searcher because of searcher interest, background, or database training. Voluntarily most bibliographers for each school or department search the databases applicable to their areas of responsibility. Departmental liasion, bibliographic instruction, collection development, and online searching go hand-in-hand in providing service to the university coummunity.

The patron completes a search request form for each database and brings it to the appointment. During the thirty minute session, a search interview, profile, and execution on a database occurs. The search analyst explains the search system and consults the search tools needed to perform the search. Terms are selected and possible alternative strategies formulated. The search is performed on the specified

database and a sample of titles read to the client. Subject headings and other relevant data are noted by the searcher for use if reformulation is necessary. The client and the searcher together control the relevance and the size of the search output. Advantages of the appointment system include: improved communication between searcher and patron; a kind of "quality control" over the searcher because the users must approve the sample of titles before printing the search results; it allows the library to control the amount of dollars spent by controlling the number of available appointments; provides control over the workflow; and from an organizational point of view, it formalizes the number of hours the library commits to the service and the hours of obligation of each searcher.

As we look to the future, we hope to be able to have a terminal in the reference area so that ready reference type questions or verifications might be answered at the desk. Revising our publicity brochures and a slide tape presentation to use for orientation and library instructions must be updated. Flyers to be mailed to faculty and graduate students are being investigated. As new staff are being brought on board, system training and database specific training must occur alongside continuing education for our present searchers. Inhouse presentations on new databases and search system capabilities to our colleagues who are non-searchers but who make appointments for the service must be provided.

I guess the major problem will be to balance the costs against the increasing demand for online services. Cost reductions other than raising prices for the service have been sought. The addition of the 1200 baud terminal should save online time, patrons are now being charged for SDI's, and we are decreasing the number permanent saves by having a notebook with a collection of hedges. Our experience suggests that higher charges to our user cuts not the potential demand, but the number of users who are willing and able to pay. Remember when you were an undergraduate or graduate student? What type budget did you live on from week to week? It is ridiculous to think that a student could or would be willing to pay $20-$30 for a search. If

financial support from the library for the service decreases and additional charges are passed on to the user, then the number of users will probably decrease, thus having to cut the number of appointments and staff involved in the service. If however, with the addition of the new databases in the Fall, it may follow that an increased demand may occur and as a result increase the number of appointments made available. Barring drastic fiscal or personnel cuts, the information retrieval unit at SUNY Albany will continue to develop its services in response to the changing needs of the university community.

Steve Atkinson
University Library
State University of New York at Albany

SA/alb
9/26/80

Database Searching at SUNY Buffalo

History

SUNY Buffalo has been involved in online database searching for as long as has any university in the state and perhaps in the country. We were one of the initial subscribers to the SUNY/BCN system and searched Index Medicus online from 1968 or 1969 (through our Health Sciences Library.) In 1973 and 1974 when the system was expanded to include Psychological Abstracts and ERIC, the Health Sciences Library continued to do all searching for the entire campus community. In 1975 it was decided that the graduate social sciences and humanities library - Lockwood Library - would also begin offering search services. At that time members of Lockwood's staff were trained by the Health Sciences Library staff and this effectively signalled the beginning of a dispersed search service. The concept of a dispersed service has continued since then, and in Fall of 1978, the Science and Engineering Library began offering online searches of science and technology databases.

To backtrack a bit, when SUNY/BCN went out of business in 1977 we, along with many of their other subscribers, decided to contract with Bibliographic Retrieval Services (BRS). Today we continue to use BRS as our major search vendor. In addition to BRS we offer the services of the National Library of Medicine system through our Health Sciences Library and limited access to the Lockheed databases through the Science and Engineering Library. In Lockwood BRS is the only system which we currently offer. At this point you can see that we offer a completely dispersed service with the Health Sciences Library, the Science and Engineering Library and Lockwood all providing search services. In addition our Law Library subscribes to the Lexis system and offers the service to its patrons at no cost. Lexis is somewhat different from the other systems since it requires no search intermediary and the patron sits

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Delivered at the SUNYLA Annual Conference, June, 5, 1980
Patricia Tegler

down to the terminal and searches for himself or herself. Staff time is limited to teaching potential users to perform their own searches. Our Undergraduate Library is also involved with searching in a limited fashion since search requests are submitted to the State Library by the Undergraduate librarians.

There are two major guidelines which must be followed by the three separate search systems, but within these guidelines there is a great deal of flexibility in terms of organization, staff utilization, and actual search practice. The first of these guidelines is that each of the libraries must offer search services at no cost for a basic search - the definition of which I will explain in a few moments. Secondly, each of the libraries searches primarily in the areas in which it collects literature. Each of the libraries has its own mission - Lockwood is responsible for searching in the social sciences and humanities, the Health Sciences Library is responsible for searching the biomedical literature, and the Science and Engineering Library searches primarily in the science and technology literature. Each library serves all patrons, regardless of departmental affiliation, who wish to have searches done of the databases in which that library specializes. This is not a rigid system, however it is felt that the library which is responsible for a particular type of literature can provide the best search in that discipline. For example, if an Education student was interested in having a comprehensive search done of the literature related to medical education, the search of ERIC would be done at Lockwood Library while the Medline search would be done at the HSL. Our feeling is that the searchers who search extensively in Medline would be better able to offer a quality search than would those of us who have relatively little experience or expertise in this area. However, if a less comprehensive search were needed, a quick search of Medline might have been done by the Lockwood search librarian.

Fees and Charges

As I mentioned before, "a basic search" is offered at no charge through all three of the libraries. Currently a basic search is defined as a) the online time sufficient to formulate the search, and b) up to 100 citations or 50 citations with abstracts. Additional printing is done at cost to the patron. In some cases printing is done online if it is deemed cost effective. There are some variations to the basic theme noted here, but essentially this is the way that each of the libraries operate.

This has not always been the case. In the past some modest costs have been charged and numerous different fee schedules have been in effect. However the one thing that has remained constant is that searching in our library system has always been heavily subsidized by the libraries.

Individual variations of the "Basic Search" are as follows:

At the Health Sciences Library no abstracts are ever printed, and all printing is currently done online. There is a $5 charge for searches of the backfile of any database and a $10 charge for users not affiliated with the University. At Lockwood, a few citations are printed online if the search needs clarification, but abstracts are not printed. Occasionally if the number of citations is relatively small and the database is a non-royalty database, printing may be done online. Additional charges are as follows: $1 per each additional 25 citations without abstracts, or $1 each additional 12 citations with abstracts. The Science and Engineering Library's procedures are the same as Lockwood; however, the basic search has been redefined for Lockheed databases. Up to 25 citations or 12 citations with abstracts are printed at no cost. Charges for additional printing are $.10 per citation or $.20 per citation with abstract.

Funding

Funding is provided by the basic library budget. A fixed amount is set aside and each library is free to set up its own procedures and organization provided that

the cost of searching does not exceed the amount of the subsidy. The overall library searching policy does require approval from the Director of Libraries.

Since the demand for the service is great and the subsidy is not, there are definite financial constraints on the service. The Health Sciences Library handles a much larger volume of searching than does the other libraries, but they are limited in that they place severe restriction on the amount of searching done on royalty databases. Lockwood restricts its service by the number of appointments scheduled for each week. The demand greatly exceeds the 25 weekly appointments available. Consequently at certain times of the year, primarily mid-semester, the wait for an appointment can be as long as four weeks. SEL has the newest service and to date has lower demand for searches. Expansion of the service has been limited due to staff and budget considerations.

Implementation of Searching

Screening and Appointment Scheduling:

The libraries are a chronicle of the many ways in which systems can be organized. Over the years several different models have been tried, and currently each of the three libraries' appointment and screening systems are different.

Lockwood

The most recent practice has been that patrons make requests at the reference desk and the librarian at the desk determines if the question is appropriate for a search. Patrons are asked to fill out a search form at that time or at some time prior to the date of the scheduled search. They are then signed up for an appointment which is scheduled for one hour.

Recently we have been discussing the idea of doing most of our searching without the patron present. We have come to consider this idea since we are trying to provide the most service to the largest number of patrons for the same amount of money. We have noticed that searches which are done without the patron present

tend to involve less online time since the thrust of the search cannot be changed in midstream and patrons are not trying to make decisions while the terminal is running and costing money. We are seriously considering the idea of asking patrons who come to the reference desk to request search appointments to phone a search librarian during specifically scheduled phone hours and to talk to the search librarian about their topic. If the topic is relatively straightforward, the librarian will complete the search during his or her next available search hour and will leave the results for the patron to pick up. If the search is deemed too complex to do without the patron present, the patron will be scheduled during a limited number of search hours which will be set aside for patron/searcher interaction. We recognize that there are a number of tradeoffs involved and we would set up this system for a trial period before making a definite change; but is is our hope that we might be able to do effective searches for more patrons during the same number of hours - 25 - and with the same investment of staff time.

You will note that in the past and actually at the immediate present time one hour has been set aside per patron. In the beginning, when we were less experienced we found it necessary to spend that much time with each patron. We also did most printing online. Currently we generally spend up to 15 minutes discussing the search and then approximately 20 minutes of online time, often searching more than one database, in doing each search. We do not often spend the entire hour but generally we do find that we spend more than one half hour per patron. In part this is because of the nature of the social sciences and humanities - the imprecision of the terminology requires the use of a number of synonyms and more time to precisely define the search. Also most of our searches are for graduate students who are working on their dissertations and need more than one database searched and a large amount of material. We find that this is an excellent opportunity to talk with patrons about their research interests and projects. Since each of the searchers is

also involved in collection development, we find that this can help us with selection.

HSL

At the Health Sciences Library one-half hour appointments are scheduled during seven hours each weekday. This totals 70 appointments per week. Patrons who are interested in having computer searching done, sign up at the reference desk. At the time of the search a search form will be completed. All searching and printing are done online except for searches of the back files of the databases; these can be searched only offline. No abstracts are printed.

SEL

At the Science and Engineering Library, too, the patron's initial contact is made at the reference desk. If the topic is deemed appropriate, the patron is asked to contact a search librarian by phone or in person. (The patron is given the information by the reference librarian who can in many cases be a search librarian as well). Oftentimes the patron makes the contact with the searcher immediately and the search is done at the time of the initial request. All printing is done offline. If the search cannot be done at the time of the initial request, the searcher and the patron make an appointment for the search to be done -- with the patron present - at a mutually convenient time. There are no regularly scheduled appointment times. This system has worked out well primarily because the demand for the service is at a manageable level. In all three of the libraries, the patron who would be better served by a printed index is screened out at the time of the initial request at the reference desk.

Patricia Tegler
SUNY Buffalo
June, 1980

SUNY BUFFALO DATA BASE SEARCHING

*Searches per Month

Lockwood Library	222 avg. per month (2659 in 1979/80)
Science and Engineering Library (SEL)	50 per month (est.)
Health Sciences Library (HSL)	300 - 400 per month (est.) An additional 100 - 150 searches per month are done for local health professionals through the HSL Information Dissemination Service.

Users by Status

	Lockwood	SEL	HSL (est.)
Faculty	16%	24%	30%
Graduates	71.5%	57%	40%
Undergraduates	12.5%	15%	30%
Off-Campus	-	4%	-

Most Used Databases

Lockwood	40%	ERIC
	20%	Psychological Abstracts and National Clearinghouse for Mental Health
	12%	Social Science Citation Index
	10%	Dissertation Abstracts
	11%	Inform and Management Contents
	7%	Other (Booksinfo, NTIS, Exceptional Child Abstracts

SEL (approximation, in order of use)

Chemical Abstracts
NTIS
BioAbstracts
Inspec
Others (Air Pollution Abstracts, ASFA, CAIN, Compendex, Dissertation Abstracts, Energyline, Enviroline, ISMEC, Mesh, Metadex, Oceanic Abstracts, Scisearch, SPIN, World Aluminum Abstracts)

* each data base searched is considered a search

Most Used Databases

Health Sciences Library	80%	Mesh
	20%	Others (other NLM databases, Biosis, Chemical Abstracts, ERIC, NCMH)

Reference Questions - Percentage of Total Searches

Lockwood	15%
SEL	20%
HSL	10%

Number of Search Librarians

Lockwood	4
SEL	3
HSL	3

Number of Users

Approximately 1000 different individuals used Lockwood Computersearch during 1979/80. There are no figures available for the other libraries.

DATA BASE SEARCHING AT SUNY/STONY BROOK

This morning I would like to address several of the practical aspects of data base searching at SUNY at Stony Brook. Who are our searchers, how are they trained, how do we conduct a search, who uses the service, and how is the service financed? In addition, I hope to point out some of the problems which we have encountered in offering the service, and some of the questions we feel will need answering in the near future.

The State University of New York at Stony Brook began computerized literature searching in the fall of 1974, using the four data bases available through the now defunct SUNY Biomedical Communications Network. Since 1977, with the demise of SUNY BCN, we have been utilizing the data bases available through Bibliographic Retrieval Services, better known as BRS. We also have on-line access to Systems Development Corporation, but limit our searches on SDC to GEOREF, the Geological Data Base. In fact, only the librarian from the Earth and Space Sciences Library Branch has received the training and does searching on the SDC system. This decision was made primarily for economic reasons--GEOREF costs $85.00 per hour of connect time. Furthermore, all of the other data bases on SDC which are useful to our academic clientele,are also available on BRS at a less expensive rate.

The libraries at SUNY at Stony Brook include the Main Library and five science branch libraries. The Health Sciences Library is under a completely separate administration. Although the Librarians in that unit do a great deal of computerized literature searching, because of this separation, the data base service in the Health Sciences Library is not included in the following discussion.

Data base searching at Stony Brook is not isolated as a special, elite service, but is, rather, integrated into traditional reference functions? In the main library, the computer terminal is located adjacent to the reference desk. Searches are provided, free of charge, to anyone with a valid Stony Brook ID--students, faculty and staff.

As part of their regular duties, four reference librarians devote approximately 9 hours per week each to data base searching. The Earth and Space Sciences Librarian also utilizes the main library terminal, but schedules only a few searches per month. Two Biology Librarians conduct searches on the life sciences data bases on a separate terminal located in the Biology Branch Library. One of the four searchers in the Main Library is the coordinator of data base searching at Stony Brook.

Initial training for the data base searchers is done in several one-hour sessions by the coordinator, using an in-house workbook and the BRS Manual. Eventually, the trainee conducts practice searches at the terminal (usually on the ERIC file) with the coordinator present, and then alone until the new searcher feels the confidence to conduct searches for patrons. Further training for all of the searchers is received from the producers of data bases at various regional meetings. Because of the time and expense involved, one or two searchers usually attend and report back to the others. In the past year, searchers at Stony Brook have received training at sessions sponsored by ERIC, Chemical Abstracts, Biological Abstracts, and Medlars.

Continuing education is fairly informal at Stony Brook. All searchers receive copies of the BRS Bulletin which keeps us informed of system changes and new data bases. Our coordinator attends the BRS meetings and update sessions and shares with us any new information. Although in the past they have been

called only occasionally, meetings of all searchers have been held to discuss new developments or to clarify search strategy on new data bases. Additionally, we are all members of a local user's group where searchers from various academic and special libraries meet monthly to discuss on-line bibliographic retrieval.

As previously stated, the two biology librarians schedule and conduct their own searches on the terminal in the branch library. All other searches take place in the Main Library. These searches are scheduled at the reference desk by a reference librarian who conducts the initial interview to determine if the patron's topic warrants an appointment for use of the data bases. Our policy is not to conduct searches on a one-term subject, where information is readily available in a printed index, or for which a bibliography exists. Some students, both graduates and undergraduates who have heard of this service, are screened out at the time of their request for an appointment, but are, we hope, tactfully steered to the appropriate printed sources. Reference librarians, however, also frequently suggest to patrons with complicated research topics that a data base search is appropriate and introduce them to the service.

Appointments are scheduled hourly, Monday through Friday, from 9:00 AM to 5:00 PM with the noon to 1:00 PM slot left vacant. Although it was not initially intended to accommodate such interruptions, this lunch hour is occasionally used to finish up incomplete searches previously terminated. These terminations have been due to such unforeseen circumstances as computer failures, a fire drill, or, as occurred last year, numerous evacuations of the building because of bomb threats.

At the time the appointment is scheduled by the librarian at the reference desk, the patron is given a form to be filled out and brought to the terminal for use during the search. On the form, the patron is requested to briefly explain the search topic. The reference librarian at the desk is assisted in scheduling by a listing of the data bases currently available. The subject area covered,

printed indexes searchable, number of years of information on-line, and searchers assigned to the data base, is provided for each data base listed.

In the main library, one of the searchers has a subject background in the sciences and is assigned the searches in the physical sciences, because of this expertise. But all four of us do searches in all of the other data bases in the social sciences. When necessary, because of the interdisciplinary nature of a particular topic, we may be required (or feel obligated) to search a data base outside our own subject background--and we are free to do so. When this occurs and we do not feel competent in the data base, we do inform the patron of this fact, and ask them to schedule another search with someone experienced in the field-if they wish more information. For example, after a thorough search on the psychology data bases, we may enter the medical data base to determine what might be available. If the information on this data base appears to be substantial, the searcher may suggest that the patron schedule an appointment for an additional search with a health sciences librarian.

All patrons are required to be present during the search. During the first part of the scheduled hour, the searcher conducts an in-depth interview to determine the information required. At this time, the patron is informed of what the computer can and cannot do, and assists the searcher in planning the search strategy--selecting the terms from the data base thesaurus or key words for a free text search. At Stony Brook, the average on-line time for a search is 20 minutes, although some searches may be completed in only 5 minutes, and others, where several data bases are involved, may last for up to 40 minutes. It is our policy to print 10 or fewer citations on line for the patron. We will request any number of citations off-line. This means that the computer prints the bibliography at the center in upstate New York and it is mailed to our campus. Patrons

are informed when the bibliography arrives, a minimum of three business days because of the Postal Service. The bibliography is then picked up in the Reference Office, at which time the printing charges of 10¢ a page are collected.

Our statistics have shown, after several years of offering this service, that usage is fairly predictable. We perform very few searches during intersessions, during the first month of classes, during finals week, and over the summer months primarily because our student population is very small at those times. From the 4th week of class to the end of the semester, we find that almost every hour of computer time has been scheduled. It is not unusual, during our busy season each semester, for a student to wait a week for an appointment.

The number of searches conducted per month has been steadily increasing. Our busiest month to date was April of this year, when we performed searched for 116 patrons, utilizing 199 data bases. To illustrate the number of searches done during a semester, I will use the monthly statistics for fall, 1979. In August, 48 searches were conducted: in September, 76: in October, 101: in November, 100, and in December, 77.

At Stony Brook we also compile monthly statistics on patrons served, divided into undergraduates, graduates, faculty, staff or administration and off-campus users. Although we personally conduct very few searches for faculty or administration, many graduate students readily admit that they are present to obtain a bibliography for a faculty member. Second, and even third party searches are definitely discouraged, but are sometimes unavoidable.

Most of the searchers at Stony Brook would readily claim that we do far more

searches for graduate than for undergraduate students. However, in compiling and analyzing the statistics for this presentation, I have discovered that the number of searches conducted for undergraduates and graduates during both the fall and spring semesters of this academic year is approximately equal. In previous years, searches for graduate students did far outnumber those done for undergraduates, but those undergraduates have been steadily gaining in numbers. Our coordinator believes that undergraduates majoring in biology are responsible for much of this increase, but the statistics have not yet been thoroughly analyzed.

Perhaps the explanation for this misconception on the part of the searchers in the main library is that, in general, graduate students arrive with sufficiently complicated or specific topics which may require searching on several data bases, and these graduates also usually request extensive bibliographies covering all aspects of their research--research intended for a masters paper or doctoral dissertation. Undergraduates, however, are frequently satisfied with the first ten or twenty citations on a two-term subject search in order to complete a term paper. Their topics are usually fairly straightforward, involve only a short time on the terminal, and seem simple in comparison.

With an increasing number of students becoming aware of the service at Stony Brook, we are confronted with a new problem--the undergraduate who has learned to use the "system." For example, the student may request a search on school dropouts. When shown a printed index with 2 pages of citations, the student then indicates he or she only wants articles on white suburban school dropouts. If a scan of titles turns up several articles, further limitations are then added--such as white suburban school dropouts at the junior high school level. This then becomes a legitimate topic for a data base search, and it is impossible to refuse the patron. I believe we can justifiably question whether this is the best use of such a costly service.

On the other hand many undergraduates are doing sophisticated research, and/or have been assigned sufficiently complicated topics that a data base search may be the only means of locating pertinent information. This brings us to the debate of whether undergraduates should be excluded from data base searching.

In my opinion, no one group in the academic community should be flatly denied a library service. When and if funding does become a problem, other solutions should be considered. For example, in-depth pre-search interviews might be conducted to screen all patron requests for searches.

The last category of patrons which we serve at Stony Brook are labeled off-campus users--those persons not possessing a valid Stony Brook ID. These patrons are very few in number--only eight during the fall semester, 1979. For off-campus patrons, we charge $10.00 for each 15 minutes of on-line time in addition to the usual printing fee of 10 cents per page for an off-line bibliography. Although, as a publicly-supported institution, we do feel obligated to honor requests for data base searches from anyone, we do not encourage use by off-campus patrons. Whenever it is appropriate, we refer these patrons to other agencies offering searches--the BOCES network for professional educators, and in particular, a public library that has a federal grant to provide free searches for residents of Long Island.

In addressing the question of which data bases are most frequently used at Stony Brook, the subject areas essentially reflect the curriculum at the University. Because of the very large graduate program in the Psychology Department, the Psychological data base is the most heavily used in the Main Library, with an average of 35 searches per month. ERIC is second with 25. All of the other data bases are approximately equal with 3 to 4 searches per month. Because a second librarian, trained in data base searching, joined the staff of the Biology branch library, searches on Biological Abstracts have rapidly increased this year and

are now almost equal to the number in psychology. Although Stony Brook is known as a science school, very few searches are done on the physics, chemistry and engineering data bases--only 3 to 4 per month. We believe that this is due to the fact that these branch libraries do not have terminals, nor do the librarians do searching, and consequently the service is not promoted. In addition, the faculty in these departments tend to use the branch libraries almost exclusively, rarely if ever finding the need to visit the Main Library.

In October of 1979, the reference department began offering an on-line ready reference service. Patrons fill out a short form stating their question and check back at the reference desk within 24 hours for the answer. After completing a search on the terminal, the librarian checks the ready reference box and queries the computer for the answer. From two questions last October, our requests have increased to 14 in April of 1980. Almost all of the questions have been answered through the New York Times Data Bank. Our terminal is also used, very infrequently, for ILL verification and for acquisitions information.

As a final point of practical information about data base searching at Stony Brook, the subject of financing must be discussed. As previously stated, all on-line searches for persons with a Stony Brook ID are free of charge. The fee for off-line bibliographies, of 10 cents per page, covers only approximately half the actual cost. In actuality, we are offering data base searches almost free of charge to the entire academic community.

During the last fiscal year, Stony Brook spent approximately $18,000 to subsidize data base searching. This figure includes all fees paid to BRS and SDC and all equipment and communications expenses. It does not include the salaries of searchers. $18,000, as a sum of money, is not a small amount. However, when compared to a total library budget of 3 million, or to the 1 million dollar book budget at Stony Brook, it appears as a small figure indeed. A University the size

of Stony Brook can surely afford this sum to subsidize such a valuable public service.

Data base service at Stony Brook has remained essentially unchanged for the past two years. But we will be confronting the issue of expansion of services in the near future. Stony Brook has requested permission to offer searches on the Lockheed data bases, but so far the paper work has been stalled at SUNY Central. I do believe, however, that eventually we will be allowed to begin offering this new service.

At this time, it is impossible to predict demand for the files offered on Lockheed. Almost certainly there will be extensive use of the MLA Bibliography, Sociological Abstracts and the history data bases. If, as we anticipate, offering these additional data bases does result in an entirely new group of patrons requesting searches, then we will be forced to confront the issue of increasing service. This, in turn, means the possibility of increased staff time, another terminal and more funding. Given the present fiscal situation in the SUNY system, the future does not look too promising.

For the moment, however, we believe that data base searching is an integral part of reference service, and hope to continue to subsidize computerized bibliographic searching for as long as possible.

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